

**METHOD AND DEVICE FOR PROGRAMMING AN ELECTRICALLY
PROGRAMMABLE NON-VOLATILE SEMICONDUCTOR MEMORY**

Abstract of the Disclosure

5

A device and method for programming an electrically programmable memory accesses a group of memory cells (MC1-MCk) of the memory to ascertain a programming state thereof (401,407;503,509a,513a); applies a programming pulse to those memory cells in the group whose programming state is not ascertained to correspond to a desired programming state (405;507a,509c,513c); and repeats the steps of accessing and applying for the memory cells in the group whose programming state is not ascertained (411;509b,513b). After the programming state of a prescribed number of memory cells in the group has been ascertained, the memory cells in the group are accessed again and the programming state of the memory cells whose programming state was previously ascertained is re-ascertained (413,415;515). At least one additional programming pulse is applied to those memory cells in the group whose programming state is not re-ascertained (405;507a,509c,513c). The method guarantees that the programming state of the memory cells is ascertained in conditions that closely resembles, or are substantially identical, to the conditions in which the memory cells will be accessed in a standard read.